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Kneser-Hecke operators for codes over finite chain rings.

There is a well known correspondence between lattices and codes. Via this classical construction, the weight enumerator for codes corresponds to the theta series for lattices, where one counts the number of codewords by composition, and the other counts the number of vectors in a lattice of a certain length. In this talk, we will explore how some of the attendant machinery of theta series are born out in this correspondence. In particular, we will consider the Kneser-Hecke operator, a code theoretic analogue of the classical Hecke operator. (Received August 06, 2016)